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Chapter 18 Reviews, Investigations & Analyses

Introduction

Reviews and investigations are used by wildland fire and aviation managers to assess and improve the effectiveness and safety of organizational operations.

Reviews

Reviews are methodical examinations of system elements such as; program management, safety, leadership, operations, preparedness, training, staffing, business practices, budget, cost containment, planning, and interagency or intra-agency cooperation and coordination. Reviews do not have to be associated with a specific incident. The purpose of a review is to ensure the effectiveness of the system element being reviewed, and to identify deficiencies and recommend specific corrective actions. Established review types are described below and include:

- Preparedness review
- After action review
- Fire and aviation safety team review
- Aviation safety assistance team review
- ~~National cost oversight team review~~
- Large Fire Cost Reviews
- Individual fire review
- Lessons learned review
- Escaped prescribed fire review

Preparedness Reviews

Fire preparedness reviews assess fire programs for compliance with established fire policies and procedures ~~as~~ outlined in the current *Interagency Standards for Fire and Fire Aviation Operations* and other pertinent policy documents.

Reviews identify; organizational, operational, procedural, personnel, or equipment deficiencies, and recommend specific corrective actions. Interagency Preparedness Review Checklists can be found at:

http://www.nifc.gov/policies/preparedness_reviews/preparedness_reviews.htm

- **BLM/FS - Preparedness review functional checklists that can be found at:**
http://www.blm.gov/nifc/st/en/prog/fire/fireops/preparedness/preparedness_review.html.

After Action Reviews (AAR)

An AAR is a learning tool intended for the evaluation of an incident or project in order to improve performance by sustaining strengths and correcting weaknesses. An AAR is performed as soon after the event as possible by the personnel involved. An AAR should encourage input from participants that is focused on:

- what was planned?

- 1 • what actually happened?
- 2 • why it happened?
- 3 • what can be done the next time?

4
5 It is a tool that leaders and units can use to get maximum benefit from the
6 experience gained on any incident or project. When possible, the leader of the
7 incident or project should facilitate the AAR process. However, the leader may
8 choose to have another person facilitate the AAR as needed and appropriate.
9 AARs may be conducted at any organizational level. However, all AARs follow
10 the same format, involve the exchange of ideas and observations, and focus on
11 improving proficiency. The AAR should not be utilized as an investigational
12 review. The format can be found in the *Interagency Response Pocket Guide*
13 (*IRPG*), *PMS #461*, *NFES #1007*

14 15 **Fire and Aviation Safety Team (FAST) Reviews**

16 Fire and Aviation Safety Teams assist agency administrators during periods of
17 high fire activity by assessing policy, rules, regulations, and management
18 oversight relating to operational issues. They can also do the following:

- 19 • Provide guidance to ensure fire and aviation programs are conducted safely.
- 20 • Assist with providing immediate corrective actions.
- 21 • Review compliance with OSHA abatement plan(s), reports, reviews and
22 evaluations.
- 23 • Review compliance with *Interagency Standards for Fire and Fire Aviation*
24 *Operations*.

25
26 FAST reviews can be requested through geographic area coordination centers to
27 conduct reviews at the state/regional and local level. If a more comprehensive
28 review is required, a national FAST can be ordered through the National
29 Interagency Coordination Center.

30
31 FASTs include a team leader, who is either an agency administrator or fire
32 program lead with previous experience as a FAST member, a safety and health
33 manager, and other individuals with a mix of skills from fire and aviation
34 management.

35
36 FASTs will be chartered by their respective Geographic Area Coordinating
37 Group (GACG) with a delegation of authority, and report back to the GACG.

38
39 Fast reports ~~includes:will include~~ an executive summary, purpose, objectives,
40 methods/procedures, findings, recommendations, follow-up actions (immediate,
41 long-term, national issues), and a letter delegating authority for the review. ~~As~~
42 ~~follow up, the team will gather and review all reports prior to the end of the~~
43 ~~calendar year to ensure identified corrective actions have been taken.~~ FAST
44 reports should be submitted to the geographic area with a copy to the Federal
45 Fire and Aviation Safety Team (FFAST) chair within 30 days. See Appendix O
46 for sample FAST Delegation of Authority.

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4 **Aviation Safety Assistance Team (ASAT) Reviews**

5 During high levels of aviation activity it is advisable to request an Aviation
6 Safety Assistance Team (ASAT). The team's purpose is to assist and review
7 helicopter and/or fixed wing operations on ongoing wildland fires. An ASAT
8 team should be requested through the agency chain of command and operate
9 under a delegation from the appropriate state/regional aviation manager or
10 multi-agency coordinating group. Formal written reports will be provided to the
11 appropriate manager. An ASAT should consist of:

- 12 • Aviation Safety Manager
- 13 • Operations Specialist (helicopter and/or fixed wing)
- 14 • Pilot Inspector
- 15 • Maintenance Inspector (optional)
- 16 • Avionics Inspector (optional)

17

18 ~~**National Large Fire Cost Oversight Team Reviews**~~

19 ~~A National Cost Oversight Team will be assigned to a fire with suppression~~
20 ~~costs of more than 5 million dollars. This team will include a Line Officer (team~~
21 ~~lead), Incident Business Specialist, Incident Management Team Specialist, and a~~
22 ~~Financial Specialist. The team lead and the receiving agency administrator can~~
23 ~~agree to add team members as needed to address issues specific to the incident,~~
24 ~~i.e., aviation, personnel, or contracting specialists.~~

25

26 Information on large fire cost reviews can be found in Incident Management,
27 and at <http://www.nwcg.gov/general/memos/nwcg-003-2009.html>

28

29 **Individual Fire Reviews**

30 Individual fire reviews examine all or part of the operations on an individual
31 fire. The fire may be ongoing or controlled. These reviews may be a local,
32 state/regional, or national. These reviews evaluate decisions and strategies,
33 correct deficiencies, identify new or improved procedures, techniques or tactics,
34 determine cost-effectiveness, and compile and develop information to improve
35 local, state/regional or national fire management programs.

36

37 ~~**Lessons Learned Review (LLR)**~~

38 ~~The LLR provides the wildland fire community an immediate learning~~
39 ~~opportunity in the form of a written report in an effort to identify underlying~~
40 ~~factors that could lead to future accidents and/or provide reasons for successes~~
41 ~~all in support of organizational learning and accident prevention. This process~~
42 ~~bridges the gap between the after action review (performed on site immediately~~
43 ~~after the operation and conducted by the participants themselves) and the~~
44 ~~accident investigation (formally mandated effort to identify causes and develop~~
45 ~~control measures). LLRs provide an outside perspective with appropriate~~

~~technical experts assisting involved personnel in identifying root causes and sharing findings and recommendations.~~

Notification

Near misses or successful operations should be reported to first line supervisors. Supervisors will notify the unit fire management officer, ~~who~~the unit fire management officer will then notify their agency administrator. In cases of entrapment near misses, notification to the respective agency's national fire office is required ~~and~~. The determination for review/investigation level will be made from the national level.

- NPS - Park Units will notify Regional FMOs of the need for review or investigation.

Lessons Learned Reviews (LLR)

The purpose of a LLR is to focus on the near miss events or conditions in order to prevent potential serious incident in the future. In order to continue to learn from our near misses and our successes it is imperative to conduct a LLR in an open, non-punitive manner. LLRs are intended to provide educational opportunities that foster open and honest dialog and assist the wildland fire community in sharing lessons learned information. LLRs provide an outside perspective with appropriate technical experts assisting involved personnel in identifying root causes and sharing findings and recommendations.

LLR Process

An LLR should be tailored to the event being reviewed and the extent of the review should be commensurate with the severity of the incident being reviewed. An LLR should not be used in lieu of a Serious Accident Investigation (SAI) if the SAI criteria have been met.

A LLR will be led by a facilitator ~~who was~~ not involved in the event. A facilitator should be an appropriate fire management expert who possesses skills in interpersonal communications, organization, and be unbiased to the event. Personnel ~~who were~~ involved in the event will ~~also be full~~ participants in the review process. Depending upon the complexity of the event, the facilitator may request assistance from technical experts (e.g., fire behavior, fire operations, etc.).

The LLR facilitator will convene the participants and:

- Obtain delegation of authority from appropriate agency level. See appendix K for a sample LLR Delegation of Authority.
- Identify facts of the event (and tables maybe helpful in the process) and develop a chronological narrative of the event.
- Identify underlying reasons for success or failure.
- Identify what individuals learned and what they would do differently in the future.

- 1 • Identify any recommendations that would prevent future similar
2 occurrences.
- 3 • Provide a final written report including the above items to the pertinent
4 agency administrator(s) within two weeks of event occurrence. Names of
5 involved personnel should not be included in this report (reference them by
6 position).
- 7
- 8 A copy of the final report will be submitted to the respective agency's national
9 fire safety lead who will provide a copy to the Wildland Fire Lessons Learned
10 Center (WFLLC). Website: <http://wildfirelessons.net/Home.aspx>.
- 11 • *FS - The Forest Service has developed two processes for conducting*
12 *Lessons Learned Reviews: the Facilitated Learning Analysis (FLA) and the*
13 *Accident Prevention Analysis (APA). Guides have been produced for these*
14 *processes and are available from Regional and National risk management*
15 *and safety personnel.*

16 **Eseaped Prescribed Fire**

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26 **Declared Wildfire Reviews**

- 27 Escaped prescribed fire review direction is found in Chapter 18 of this document
28 and in these agency documents:
29 *Interagency Prescribed Fire Planning and Implementation Procedures Reference*
30 *Guide (September 2006/August 2008)*
- 31 • ~~*BLM - BLM 9214 Prescribed Fire Handbook and the 9215 BLM Fire*~~
32 ~~*Training Handbook.*~~
- 33 • *BLM - IM No. OF&A 2009-014*
- 34 • *FWS - Fire Management Handbook*
35 • *NPS - RM-18, Chapter 7 & 17*
36 • *FS - FSM 5140-1*

37 **Investigations**

- 38 Investigations are detailed and methodical efforts to collect and interpret facts
39 related to an incident or accident, identify causes (organizational factors, local
40 workplace factors, unsafe acts), and develop control measures to prevent
41 recurrence. Established investigation types include:
42
- 43 • Serious wildland fire accident investigation.
 - 44 • Non-serious wildland fire accident investigation.
 - 45 • Entrapment/ burnover investigation.

- 1 • Fire shelter deployment investigation.
- 2 • Fire trespass investigation.

3

4 **Wildland Fire Accident and Event Definitions**

5

6 **Notification**

7 Near misses or successful operations should be reported to first line supervisors.
8 Supervisors will notify unit fire management officer, who will then notify their
9 agency administrator. In cases of entrapment near misses, notification to the
10 respective agency's national fire office is required and determination for
11 review/investigation level will be made from the national level.

- 12 • NPS - Park Units will notify Regional FMOs of the need for review or
13 investigation.

14

15 **Serious Wildland Fire Accident**

16 An unplanned event or series of events that resulted in death; injury,
17 occupational illness, or damage to or loss of equipment or property. For
18 wildland fire operations, a serious accident involves any of the following:

- 19 • One or more fatalities.
- 20 • Three or more personnel who are inpatient hospitalized as a direct result of
21 or in support of wildland fire operations.
- 22 • Property or equipment damage of \$250,000 or more.
- 23 • Consequences that the Designated Agency Safety and Health Official
24 (DASHO) judges to warrant Serious Accident Investigation.

25

26

27

28 **Non-Serious Wildland Fire Accident**

29 An unplanned event or series of events that resulted in injury, occupational
30 illness, or damage to or loss of equipment or property to a lesser degree than
31 defined in "serious wildland fire accident."

32

33 **Near-miss**

34 An unplanned event or series of events that could have resulted in death; injury;
35 occupational illness; or damage to or loss of equipment or property but did not.

36

37 **Entrapment**

38 A situation where personnel are unexpectedly caught in a fire behavior-related,
39 life-threatening position where planned escape routes or safety zones are absent,
40 inadequate, or compromised. Entrapment may or may not include deployment
41 of a fire shelter for its intended purpose (NWCG Glossary of Fire Terminology).
42 Entrapment may result in a serious wildland fire accident, a non-serious
43 wildland fire accident, or a near-miss.

44

45 **Fire Shelter Deployment**

1 The removing of a fire shelter from its case and using it as protection against fire
 2 (NWCG Glossary of Fire Terminology). Fire shelter deployment may or may
 3 not be associated with entrapment. Fire shelter deployment may result in a
 4 serious wildland fire accident, a non-serious wildland fire accident, or a near-
 5 miss. Any time a fire shelter is deployed (other than for training purposes),
 6 regardless of circumstances, notification to the National Fire and Aviation
 7 Safety Office of the jurisdictional agency is required.

8

9 **Escaped Prescribed Fire**

10 A prescribed fire which has exceeded or is expected to exceed its prescription.

11

12 **Fire Trespass**

13 The occurrence of unauthorized fire on agency-protected lands where the source
 14 of ignition is tied to some type of human activity.

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Review and Investigation Requirements

Wildland Fire Event	Review/Investigation Type	Management level that determines review type and authorizes review*
Serious Wildland Fire Accident	Serious Accident Investigation (SAI)	National
Non -Serious Wildland Fire Accident	Non-Serious Accident Investigation (NSAI)	Region/State/Local
Near-miss	Lesson Learned Review (LLR)	Region/State/Local
Entrapment	SAI, NSAI, LLR, depending on severity	National
Fire Shelter Deployment	SAI, NSAI, LLR, depending on severity	National
Escaped Prescribed	Escaped Prescribed Fire	National/Region/State

Fire	Review	
Fire Trespass	Fire Cause Determination & Trespass Investigation	Local

1 *Management may override lower level management and request a review or
 2 investigation regardless of the above criteria.

3

4 **Agency Specific Policy Documents**

5 These documents provide specific direction related to incident and accident
 6 investigations.

	Safety	Prescribed Fire
DOI	485 DM Chapter 7	
BLM	Manual 1112-2, 1112-1	
FWS	Service Manual 095	
NPS	DO/RM-50B, RM-18 Chapter 3	RM-18, Chapter 7
FS	FSH-6709.11	FSM-5140
	FSM-5100 and FSH-6709.11 FSM 5720 (Aviation), FSM 5130 (Ground Operations), FSM 6730 (Specific policy), FSH 6709.12, Chapter 30 (General guidance), and most recent <i>Accident Investigation Guide</i> , for specific guidance.	
Interagency	Information on accident investigations may be found at: http://www.nifc.gov/safety/accident_resources.htm . For reporting use <i>PMS 405-1, Wildland Fire Fatality and Entrapment Initial Report</i> ; http://www.nwccg.gov/pms/forms_otr/pms405-1.pdf .	

7

8 **Serious Wildland Fire Accident Investigation Process**

9

10 **Fire Director Responsibilities**

11 The Fire Director(s) or designee(s) of the lead agency, or agency responsible for
 12 the land upon which the accident occurred, will:

- 13 • Notify the agency safety manager and Designated Agency Safety and Health Official (DASHO).
- 14 • Immediately appoint, authorize, and deploy an accident investigation team.
- 15 • Provide resources and procedures adequate to meet the team's needs.
- 16 • Receive the factual and management evaluation reports and take action to accept or reject recommendations.
- 17 • Forward investigation findings, recommendations, and corrective action plan to the DASHO (the agency safety office is the "office of record" for reports).
- 18 • Convene an accident review board/ board of review (if deemed necessary) to evaluate the adequacy of the factual and management reports and suggest corrective actions.

- 1 • Ensure a corrective action plan is developed, incorporating management
2 initiatives established to address accident causal factors.
3

4 **Agency Administrator Responsibilities**

- 5 • Develop local preparedness plans to guide emergency response.
6 • Identify agencies with jurisdictional responsibilities for the accident.
7 • Provide for and emphasize treatment and care of survivors.
8 • Ensure the Incident Commander secures the accident site.
9 • Conduct an in-briefing to the investigation team.
10 • Facilitate and support the investigation as requested.
11 • Determine need and implement Critical Incident Stress Management
12 (CISM).
13 • Notify home tribe leadership in the case of a Native American fatality.
14 • Prepare and issue required 24 Hour Preliminary Report.
15

16 **Notification**

17 Agency reporting requirements will be followed. As soon as a serious accident
18 is verified, the following groups or individuals should be notified:

- 19 • Agency administrator
20 • Public affairs
21 • Agency Law Enforcement
22 • Safety personnel
23 • County sheriff or local law enforcement as appropriate to jurisdiction
24 • National Interagency Coordination Center (NICC)
25 • Agency headquarters
26 • OSHA (within 8 hours if the accident resulted in one or more fatalities or if
27 three or more personnel are inpatient hospitalized)

28 Notification to the respective agency's fire national safety/risk management lead
29 is required. ~~Agency fire safety/risk management contacts are listed below:~~

- 30 • *FS - Forest Service protocol for fatalities or 3 or more serious injuries*
31 *requiring hospitalization investigation teams are assigned by the Office of*
32 *Safety and Occupational Health in the WO.*
33

34 **Designating the Investigation Team Lead**

35 The 1995 Memorandum of Understanding between the U.S. Department of the
36 Interior and the U.S. Department of Agriculture states that serious wildland fire-
37 related accidents will be investigated by interagency investigation teams.
38 Following initial notification of a serious accident, the National Fire Director(s)
39 or their designee(s) will designate a Serious Accident Investigation Team
40 Lead(s) and provide that person(s) with a written delegation of authority to
41 conduct the investigation and the means to form and deploy an investigation
42 team.
43

1 Accidents involving more than one agency will require a collaboratively
2 developed delegation of authority that is signed by each of the respective
3 agencies.

5 **Serious Accident Investigation Team Composition**

6 • **Team Leader**

7 A senior agency management official, at the equivalent associate/assistant
8 regional/state/area/division director level. The team leader will direct the
9 investigation and serve as the point of contact to the Designated Agency
10 Safety and Health Official (DASHO).

11 • **Chief Investigator**

12 A qualified accident investigation specialist is responsible for the direct
13 management of all investigation activities. The chief investigator reports to
14 the team leader.

15 • **Accident Investigation Advisor/Safety Manager**

16 An experienced safety and occupational health specialist or manager who
17 acts as an advisor to the team leader to ensure that the investigation focus
18 remains on safety and health issues. The accident investigation
19 advisor/safety manager also works to ensure strategic management issues
20 are examined.

21 • **Interagency Representative**

22 An interagency representative will be assigned to every fire-related Serious
23 Accident Investigation Team. They will assist as designated by the team
24 leader and will provide outside agency perspective.

25 • **Technical Specialists**

26 Personnel who are qualified and experienced in specialized occupations,
27 activities, skills, and equipment, addressing specific technical issues such as
28 ~~arson, third-party liability~~specialized fire equipment, weather, and
29 ~~terrain~~fire behavior.

32 • **Public Affairs Officer**

33 For investigations with high public visibility and significant news media
34 interest, a public affairs officer (PAO) should be considered to be part of the
35 team. The PAO generally should not be affiliated with the home unit. The
36 PAO should develop a communications plan for the team, be a designated
37 point of contact for news media, and oversee all aspects of internal and
38 external communications. Ideally, the PAO should be qualified as a Type 1
39 or Type 2 public information officer and be familiar with SAI team
40 organization and function.

41 • **BLM - All media related documents (news releases, talking points, etc.)**
42 should be cleared through NIFC Public Affairs prior to external release.

43 • **BLM - Coordination and mobilization is done by Fire and Aviation**
44 **Directorate's Safety and Health Manager.**

45

1 TheSAIT Final Report

2 Within 45 days of the incident, a Factual Report (FR) and a Management
3 Evaluation Report (MER) will be produced by the investigation team to
4 document facts, findings, and recommendations and forwarded to the
5 Designated Agency Safety and Health Official (DASHO) through the agency
6 Fire Director(s).

8 Factual Report

9 This report contains a brief summary or background of the event, and facts
10 based only on examination of technical and procedural issues related to
11 equipment and tactical fire operations. It does not contain opinions,
12 conclusions, or recommendations. Names of injured personnel are not to be
13 included in this report (reference them by position). Post-accident actions
14 should be included in this report (emergency response attribute to survival of a
15 victim, etc).

16
17 Factual Reports will be submitted to Wildland Fire Lessons Learned Center
18 (WFLLC) by the respective agency's fire safety/risk management leads.
19 <http://iirdb.wildfirelessons.net/main/Reviews.aspx>.

21 Management Evaluation Report (MER)

22 The MER is intended for internal use only and explores management policies,
23 practices, procedures, and personal performance related to the accident. The
24 MER categorizes findings identified in the factual report and provides
25 recommendations to prevent or reduce the risk of similar accidents. Factual and
26 Management Evaluation Report formatting can be found on the NIFC website
27 at: http://www.nifc.gov/safety/accident_resources.htm.

29 Accident Review Board/Board of Review

30 An Accident Review Board/Board of Review is used by some agencies to
31 evaluate recommendations, and develop a corrective action plan. Refer to
32 respective agency's Safety and Health policy.

33 Non-Serious Wildland Fire Accident Investigation Process**35 Notification**

36 Agency specific reporting requirements shall be followed. In most instances,
37 supervisors will notify unit fire management officer, who will then make
38 notification through chain of command.

40 Investigation Team Membership

41 Investigation team membership will depend upon the severity of the accident.
42 At a minimum, the team should consist of a chief investigator, a safety
43 advisor/manager, and one technical specialist. Team members may have dual
44 roles (e.g., chief investigator/safety advisor). More complex accidents may
45 require the need for a Team Leader and multiple technical specialists.

46

1 **Final Report**

2 Within 45 days of the accident, a final report detailing the accident to include
3 facts, findings, and recommendations shall be submitted to the senior manager
4 dependent upon the level of investigation (e.g., Local agency administrator,
5 State/Regional Director, and Agency Fire Director or their designee). If a lower
6 level investigation is conducted, a courtesy copy of the final report shall be sent
7 to the respective agency's fire safety/risk management lead.

8
9 The Final Report (minus recommendations, conclusions and observations) will
10 be submitted to Wildland Fire Lessons Learned Center (WFLLC) by the
11 respective agency's National Fire Safety Leads. Website:
12 <http://iirdb.wildfirelessons.net/main/Reviews.aspx>.

13
14 **Processes Common to Serious and Non-Serious Wildland Fire**
15 **Investigations**

- 16 • **Site Protection** - The site of the incident should be secured immediately
17 and nothing moved or disturbed until the area is photographed and visually
18 reviewed. Exact locations of injured personnel, entrapments, injuries,
19 fatalities, and the condition and location of personal protective equipment,
20 property, and other equipment must be documented.
- 21 • **Management of Involved Personnel** - Treatment, transport, and follow-up
22 care must be immediately arranged for injured and involved personnel. The
23 agency administrator or delegate should develop a roster of involved
24 personnel and supervisors and ensure they are available for interviews by
25 the investigation team. The agency administrator should consider relieving
26 involved supervisors from fireline duty until the preliminary investigation
27 has been completed. Attempt to collect initial statements from the involved
28 individuals prior to a Critical Incident Stress Management (CISM) session.
- 29 • **Critical Incident Stress Management (CISM)** - CISM is the
30 responsibility of local agency administrators, who should have individuals
31 pre-identified for critical incident stress debriefings. Also refer to The
32 *Agency Administrator's Guide to Critical Incident Management (PMS 926)*,
33 available at: <http://www.nwccg.gov/pms/pubs/pms926.doc>. Individuals or
34 teams may be available through Employee Assistance Programs (EAP's) or
35 Geographic Area Coordination Centers (GACC's).
- 36 • **24-Hour-Preliminary Report** - This report contains **only the most obvious**
37 **and known** basic facts about the accident. It will be completed and
38 forwarded by the agency administrator responsible for the jurisdiction
39 where the accident occurred. Names of injured personnel are not to be
40 included in this report (reference them by position).
- 41 • **72-Hour Expanded Report** - This report provides more detail about the
42 accident and may contain the number of victims, severity of injuries, and
43 information focused on accident prevention. It will be completed and
44 forwarded by the SAI Team. Names of injured personnel are not to be
45 included in this report (reference them by position).

- 1 • **24 and 72 Hour Reports** shall be sent to the respective agency's fire
2 safety/risk management lead for national distribution and potential posting
3 through NWCG Safety Alert System.
4

5 **Non-Serious Accident Investigation Report Standard Format**

- 6 • **Executive Summary** - A brief narrative of the facts involving the accident
7 including dates, locations, times, name of incident, jurisdiction(s), number
8 of individuals involved, etc. Names of injured personnel or personnel
9 involved in the accident are not to be included in this report (reference them
10 by position).
- 11 • **Narrative** - A detailed chronological narrative of events leading up to and
12 including the accident, as well as rescue and medical actions taken after the
13 accident. This section ~~should spell out in detail~~ will contain who, what, and
14 where.
- 15 • **Investigation Process** - A brief narrative stating the team was assigned to
16 investigate the accident. It should include a standard statement that human,
17 material, and environmental factors were considered. If one of these factors
18 is determined to be noncontributing to the accident, it should be addressed
19 first and discounted. For example, if the investigation revealed that there
20 were no environmental findings that contributed to the accident, simply note
21 the fact and move on to the next factor. Human factors or material factors
22 paragraphs should not be formulated so as to draw conclusions, nor should
23 they contain adjectives or adverbs that describe and thus render an opinion
24 into pertinent facts.
- 25 • **Findings** - Findings are developed from the factual information. Each
26 finding is a single event or condition. Each finding is an essential step in
27 the accident sequence, but each finding is not necessarily causal. Do not
28 include any more information in each finding than is necessary to explain
29 the event occurrence. Findings must be substantiated by the factual data
30 and listed in chronological order within the report.
- 31 • **Discussion** - Provide a brief explanation of factual and other pertinent
32 information that lead to the finding(s).
- 33 • **Recommendations** - Recommendations are the prevention measures that
34 should be taken to prevent similar accidents. Provide recommendations that
35 are consistent with the findings and identify at which level the action needs
36 to occur.
- 37 • **Conclusions and Observations** - Investigation team's opinions and
38 inferences may be captured in the section.
- 39 • **Maps/Photographs/Illustrations** - Graphic information used to document
40 and visually portray facts.
- 41 • **Appendices** - Reference materials (e.g., fire behavior analysis, equipment
42 maintenance reports, agreements).
- 43 • **Records** - Factual data and documents used to substantiate facts involving
44 the accident.
45

1 **Fire Cause Determination & Trespass Investigation**

2

3 **Introduction**

4 Agency policy requires any wildfire to be investigated to determine cause,
5 origin, and responsibility. Accurate fire cause determination is a necessary first
6 step in a successful fire investigation. Proper investigative procedures, which
7 occur concurrent with initial attack, more accurately pinpoint fire causes and can
8 preserve valuable evidence that would otherwise be destroyed by suppression
9 activities.

10

11 The agency or its employees must pursue cost recovery or document why cost
12 recovery is not initiated for all human caused fires on public and/or other lands
13 under protection agreement.

14

15 Fire trespass refers to the occurrence of unauthorized fire on agency-protected
16 lands where the source of ignition is tied to some type of human activity.

17

18 **Policy**

19 The agency must pursue cost recovery, or document why cost recovery is not
20 required, for all human-caused fires on public lands. The agency will also
21 pursue cost recovery for other lands under fire protection agreement where the
22 agency is not reimbursed for suppression actions, if so stipulated in the
23 agreement.

24

25 For all human-caused fires where negligence can be determined, trespass actions
26 are to be taken to recover cost of suppression activities, land rehabilitation, and
27 damages to the resource and improvements. Only fires started by natural causes
28 will not be considered for trespass and related cost recovery.

29

30 The determination whether to proceed with trespass action must be made on
31 “incident facts,” not on “cost or ability to pay.” Trespass collection is both a
32 cost recovery and a deterrent to prevent future damage to public land. It is
33 prudent to pursue collection of costs, no matter how small. This determination
34 must be documented and filed in the unit office’s official fire report file.

35 The agency administrator has the responsibility to bill for the total cost of the
36 fire and authority to accept only full payment. On the recommendation of the
37 State/Regional Director, the Solicitor/Office of General Counsel may
38 compromise claims of the United States, up to the monetary limits (\$100,000)
39 established by law 31 U.S.C. 3711[a], 4 CFR 103-104, and 205 DM 7.1 and 7.2.
40 The Solicitor/Office of General Counsel will refer suspension or termination of
41 the amount, in excess of \$100,000, exclusive of interest, penalties, or
42 administrative charges, to the Department of Justice.

43

44 Unless specified otherwise in an approved protection agreement, the agency that
45 has the land management jurisdiction/administration role is accountable for
46 determining the cause of ignition, responsible party, and for obtaining all

1 billable costs, performing the billing, collection, and distribution of the collected
2 funds. The agency with the fire protection responsibility role must provide the
3 initial determination of cause to the agency with the land management
4 jurisdiction/administration role. The agency providing fire protection shall
5 provide a detailed report of suppression costs that will allow the jurisdictional
6 agency to proceed with trespass procedures in a timely manner.

7
8 Each agency's role in fire trespass billing and collection must be specifically
9 defined in the relevant Cooperative Fire Protection Agreement. The billing and
10 collection process for federal agencies is:

- 11 • For example, a federal agency fire occurs on another federal agency's land
12 and is determined to be a trespass fire. BLM provides assistance, and
13 supplies costs of that assistance to the federal agency with jurisdictional
14 responsibility for trespass billing. The responsible federal agency bills and
15 collects trespass, and BLM then bills the federal agency and is reimbursed
16 for its share of the collection.
- 17 • For example, where BLM administered land is protected by a state agency,
18 the billing and collection process is:
 - 19 ➤ The state bills BLM for their suppression costs. The BLM will pursue
20 trespass action for all costs, suppression, rehabilitation, and damages,
21 and deposits the collection per BLM's trespass guidance.

22
23 All fires must be thoroughly investigated to determine cause. Initiation of cause
24 determination must be started with notification of an incident. The initial attack
25 incident commander and the initial attack forces are responsible for initiating
26 fire cause determination and documenting observations starting with their travel
27 to the fire. If probable cause indicates human involvement, an individual trained
28 in fire cause determination should be dispatched to the fire. Agency references:

- 29 • *BLM - 9238-1*
- 30 • *FWS - Fire Management Handbook*
- 31 • *NPS - RM-18, Chapter 8 and RM-9*
- 32 • *FS - FSM -5130 and FSM -5300*